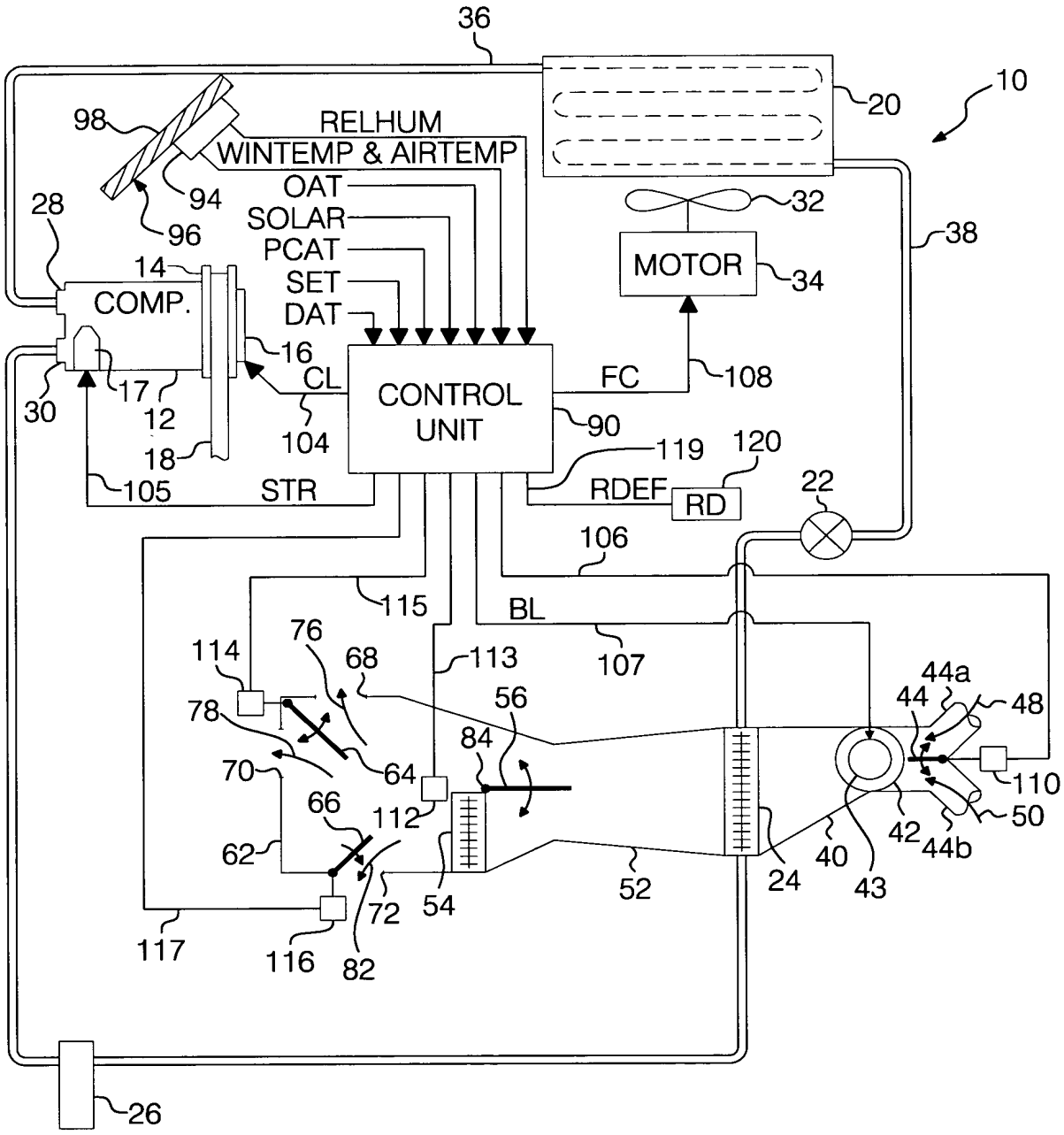
36
10
20
98
RELHUM
WINTEMP & AIRTEMP
OAT
SOLAR
PCAT
SET
DAT
94
96
28
14
COMP.
16
17
12
18
105
30
CL
104
CONTROL
UNIT
90
FC
108
MOTOR
34
32
38
119
120
RDEF
RD
STR
22
106
115
BL
107
114
76
68
113
78
56
84
70
64
66
112
62
72
54
52
24
40
43
42
44b
44a
44
48
110
50
117
116
82
26

FIG. 1

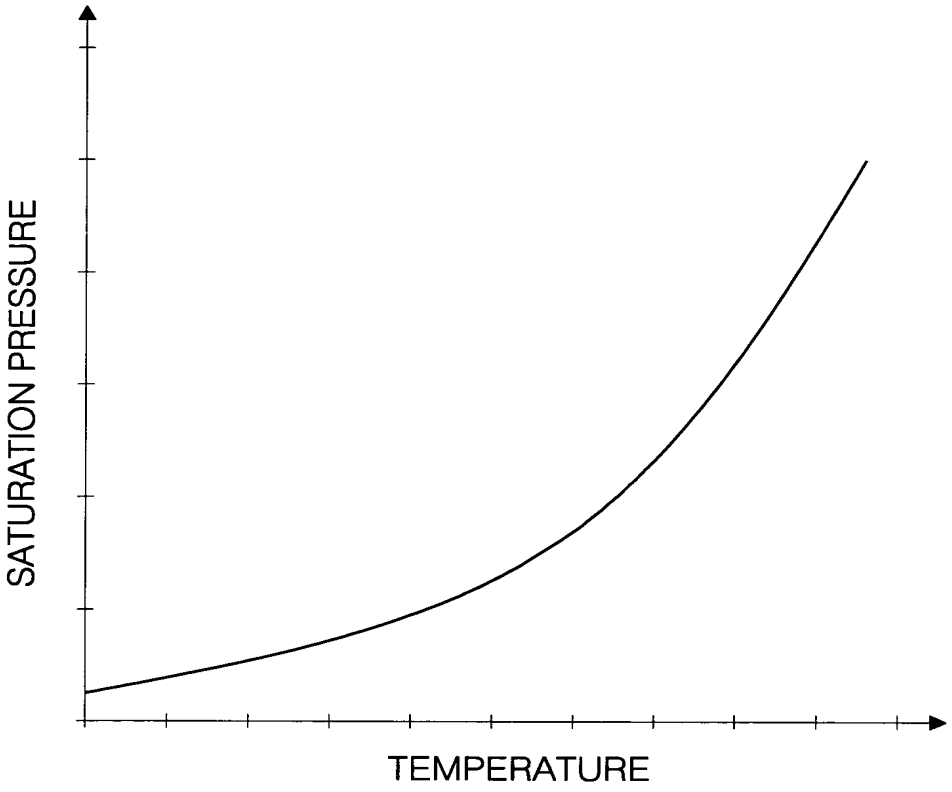
SATURATION PRESSURE
TEMPERATURE

FIG. 2

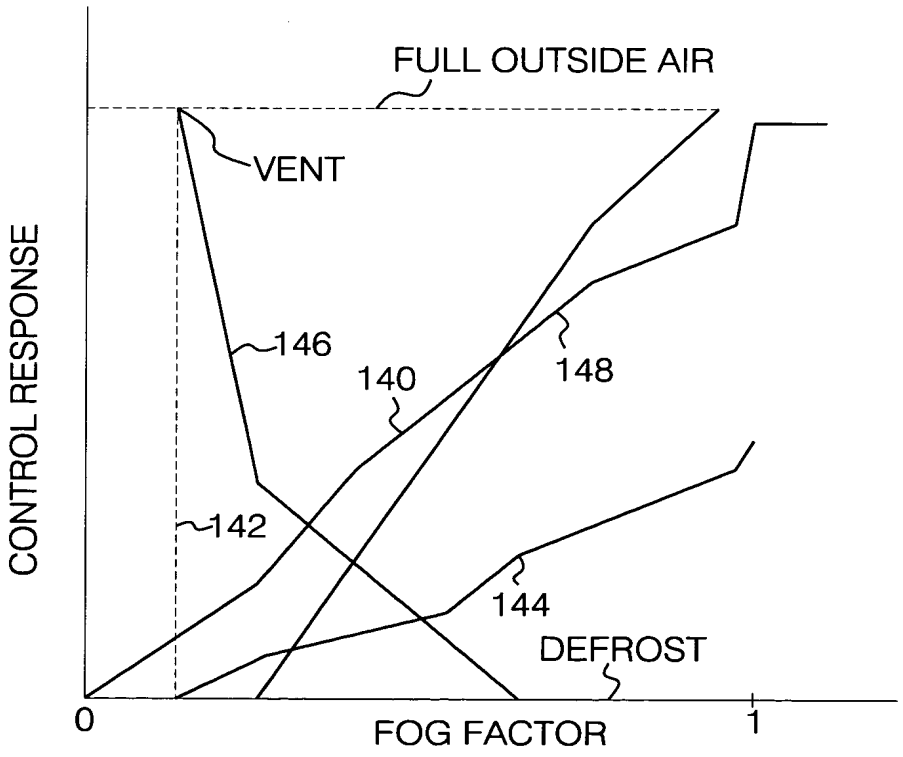
FULL OUTSIDE AIR
VENT
146
140
148
142
144
DEFROST
CONTROL RESPONSE
0
FOG FACTOR
1

FIG. 5

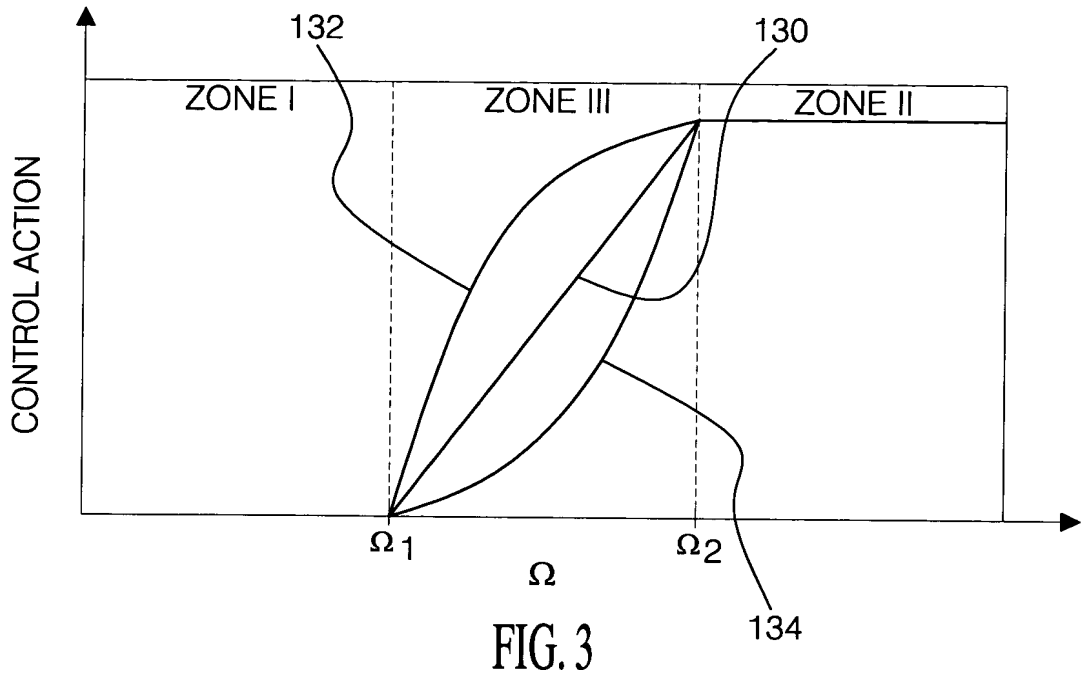
132
130
ZONE I
ZONE III
ZONE II
CONTROL ACTION
Ω1
Ω2
Ω
134

FIG. 3

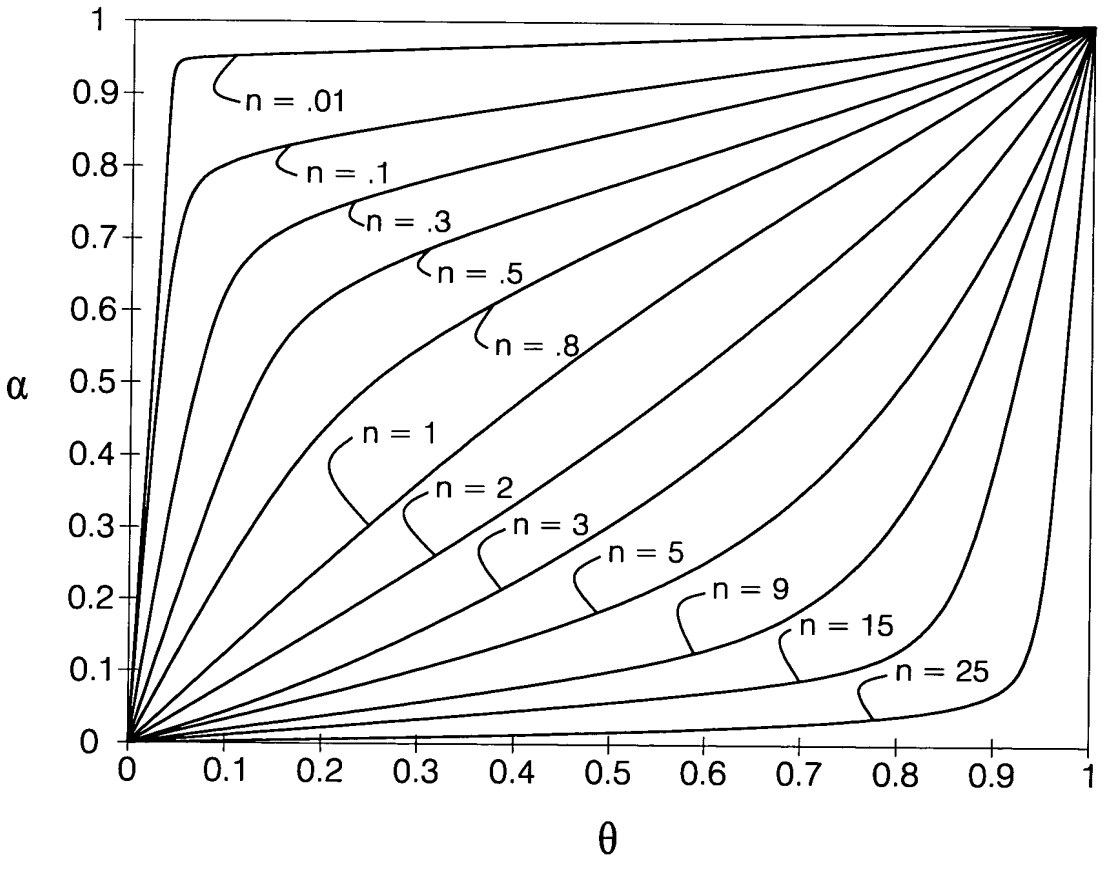
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
α
n = .01
n = .1
n = .3
n = .5
n = .8
n = 1
n = 2
n = 3
n = 5
n = 9
n = 15
n = 25
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
θ

FIG. 4

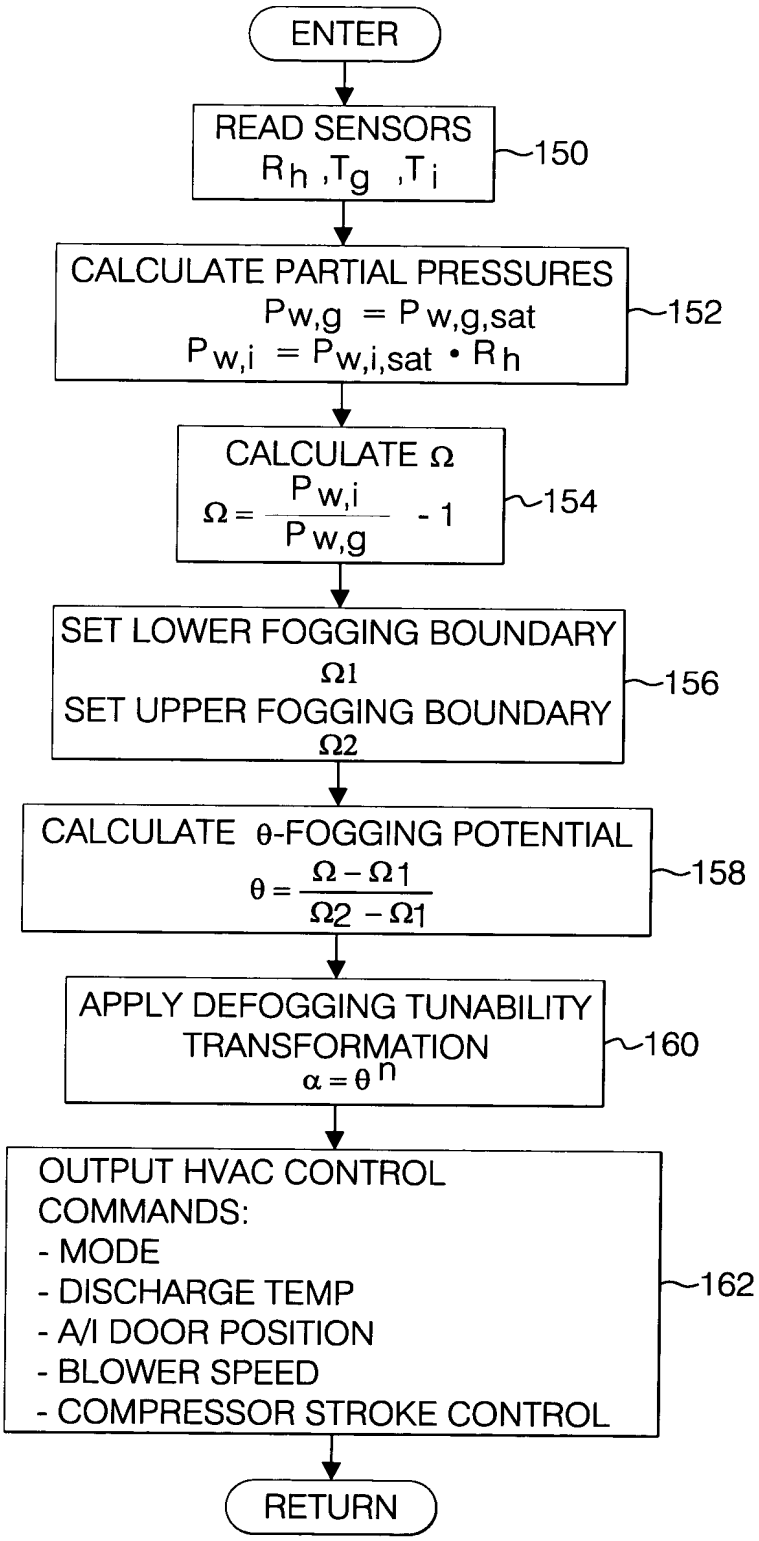
ENTER
READ SENSORS
R_h ,T_g ,T_i
150
CALCULATE PARTIAL PRESSURES
$P_{w,g} = P_{w,g,sat}$
$P_{w,i} = P_{w,i,sat} \cdot R_h$
152
CALCULATE Ω
$\Omega = \frac{P_{w,i}}{P_{w,g}} - 1$
154
SET LOWER FOGGING BOUNDARY
Ω1
SET UPPER FOGGING BOUNDARY
Ω2
156
CALCULATE θ-FOGGING POTENTIAL
$\theta = \frac{\Omega - \Omega 1}{\Omega 2 - \Omega 1}$
158
APPLY DEFOGGING TUNABILITY TRANSFORMATION
$\alpha = \theta^n$
160
OUTPUT HVAC CONTROL COMMANDS:
- MODE
- DISCHARGE TEMP
- A/I DOOR POSITION
- BLOWER SPEED
- COMPRESSOR STROKE CONTROL
162
RETURN

FIG. 6